



EACH BRAIN MATTERS

THE CENTER FOR NEUROSCIENCES FOUNDATION

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Our mission is to engage people in learning about development and lifelong care of the brain and nervous system. As neuroscientists, we see an enormous unmet need to reshape public understanding of brain health, because at the very least, the brain is fundamental to overall mental and physical well-being. By providing knowledge about brain structure and function, and by making relevant connections between this biological knowledge and behavior as well as social and emotional development, we aim to provide tools to enable individuals to respond to multiple environmental impacts. Promoting cognitive capabilities, emotional awareness, and social engagement aligns with the overarching goal of building resilient and empowered individuals.

In 2016 we purchased and outfitted the Brain Bus - a mobile neuroscience education platform for children and adults. We partner with teachers, non-profit organizations and providers interested in bringing knowledge about the brain to the public.



2023 Accomplishments

1,621 Volunteer Hours Logged

Volunteers who are uniquely qualified to speak on a variety of neuroscience topics shared information in 14 community presentations.

The Social & Emotional Neurodevelopment (SEND) curriculum, designed to educate elementary, middle, and high school students on fundamental neuroscience concepts and the brain's role in emotions, behavior, and social interactions.

The community was invited to attend an Educational Symposium with four 30-minute lectures delivered by Center for Neuroscience

Our Brain Bus traveled to 24 events in Pima County with neuroscience hands-on activities led by volunteers. Our activities educate participants of all ages and demographics. The activities are designed to be fun, but at the same time leave each participant with new knowledge about their neurological capabilities and health.

Brain Boxes were originally targeted to children in 3rd through 5th grade. In developing different iterations of the Brain Box, we soon realized that a brain "packet" was much more efficient for production and less cumbersome for the recipients. A monthly version for senior adults has been prepared and will be rolled out in January.

A variety of resource materials are available on our website and new blogs are posted every few weeks.

The Moroccan themed Grey and White Fête attracted a record crowd and a portion of the proceeds was donated to Moroccan Earthquake Relief Efforts.

Community Presentations

**6 Pima County Library
Presentations**

**5 Senior Living Community
Presentations**

**2 University of Arizona
Student Club Presentations.**

**1 National Conference
Presentation**



In 2023, Volunteers with various areas of expertise delivered presentations to the community.

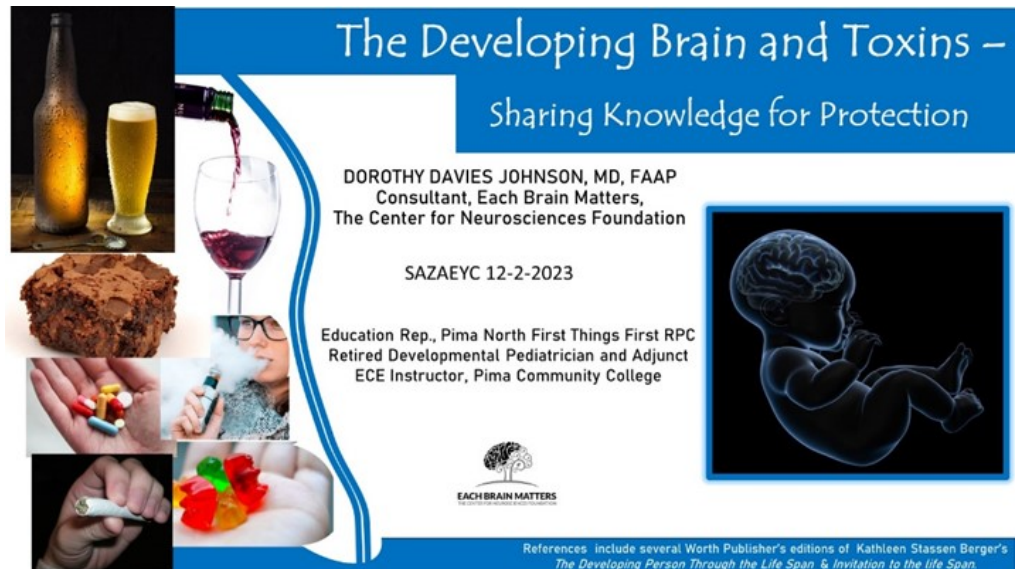
Topics included:

- Normally Aging Brain
- The 5 Senses
- Brain Anatomy
- Primary Care Perspective on Headache and Neck Pain



The Center for Neurosciences Foundation received a call from a retired Developmental-Behavioral Pediatrician, who offered her expertise to educate on the developing brain.

Please contact us to schedule your own 2024 version of Dr. Johnson's presentations as they have been enjoyed by people of all ages during 2023



May 4, 2023. La Posada Green Valley. Building the Foundation: The Developing Brain. This talk for seniors focuses on the community's role in protecting prenatal brain development from specific teratogens and the nurturing value of engaging in serve and return interaction with grandchildren, driving the synaptogenesis essential to learning.

November 18, 2023. Tucson's Birth and Baby Fest. *Protecting Amazing and Fragile Prenatal Brain Development.* This talk for expectant parents focuses on prenatal brain development, the way that it can be disrupted by various teratogens, and important maternal self-care before and throughout pregnancy to protect the developing brain.

October 27, 2023. St. Cyril of Alexandria School. *Staff Development.* Topics of myelination and synaptogenesis anchor discussion of physical and social-emotional brain care and the role of Theory of Mind and transitive inference in social comparisons and self-concept evolution through childhood.

December 2, 2023. SAZAEYC Conference.

The Developing Brain and Toxins – Sharing Knowledge for Protection, The presentation covers normal early brain development, & how perinatal exposure to various teratogens can each interfere, causing immediate and long-term harm. Discussion additionally identifies marijuana hazards for toddlers, adolescents and parents.

Conversations from Birth: Nurturing Oral Language, the Foundation for Success in Reading, School & Community, This talk highlights the importance of turn-taking and child-directed communication from birth to two years of age to optimize language development. Language-enhancing strategies and resources are provided that the early childhood educators could use and share with parents.



Community Symposium

This program was aimed at a general audience and open to all community members, including patients, their families, and healthcare professionals. The 3-hour morning session highlighted a few of the neurological problems managed by practitioners at Center for Neurosciences.

- Abhay Sanan, MD. Surgical Management of Spasticity
- Stephanie Bourn, AuD, CCC-A. Hearing Loss and Dementia: The risks, the links and the treatment
- Tijana (Tina) Skrepnik, MD. Brain Radiation: How modern radiation works to treat abnormal tissue while sparing healthy tissue
- Stephanie Niemi-Olson, MSN, FNP-C. Multiple Sclerosis: An Overview



Brain Boxes and Packets



300 Brain Boxes were assembled by Foundation volunteers alongside residents of B'nai B'rith Covenant House and delivered to students at Indian Oasis Elementary Intermediate School in Sells and Donaldson Elementary School in the Amphi District. While everyone enjoyed putting the boxes together, the decision was made to convert the learning tool to a less cumbersome paper packet of learning materials. The monthly packets are ready to roll out in January 2024.




What's a Brain Box?

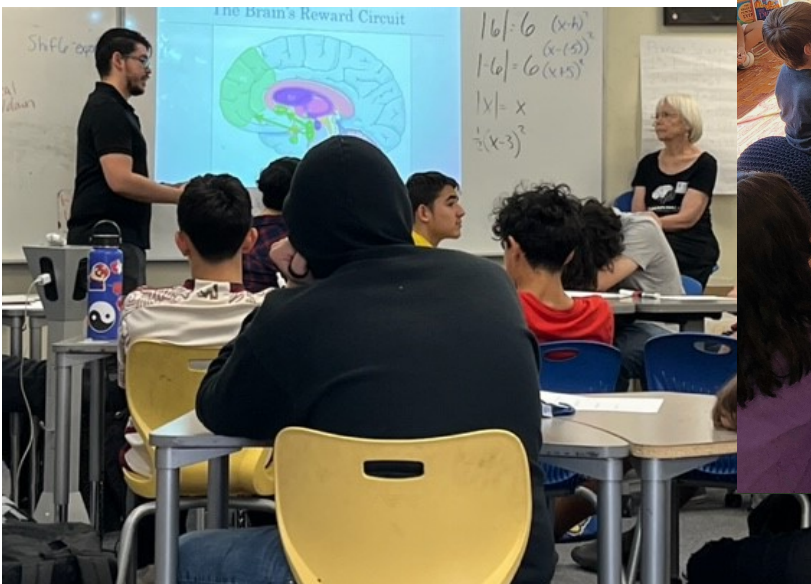
Each box contains a booklet titled A Journey through the Brain, which serves as a guide to what each major part of the brain does and provides instructions for 10 different activities, each related to a different part of the brain.

Social and Emotional Neurodevelopment (SEND)

The SEND curriculum is designed to provide elementary, middle, and high school students with an understanding of fundamental neuroscience principles and the brain's role in emotions, behavior, and social interactions. Our primary goals are to develop positive attitudes towards mental health, bolster general knowledge of neuroscience, and equip students with the insights needed to make informed decisions about their mental well-being and nurture their resilience. Our curriculum is tailored to suit the needs of each age group and offers interactive activities for elementary school students, strikes a balance between activities and lectures for middle school learners, and emphasizes critical thinking through lecture-based instruction for high school participants. For each curriculum level, we provide evidence-based guidelines designed to foster resilience, spotlighting the five pillars of optimal brain health: physical activity, quality sleep, nutritious eating, complex cognitive activities, and meaningful social interaction.



Each curriculum level concludes with science-based guidelines aimed at fostering resilience, highlighting those five pillars of optimal brain health. An evening program for teachers, parents, and counselors is now available for each level. It focuses on what is happening in the developing brain and strategies to support that development.



The Brain Bus

January 19. La Posada Health Fair. This was our first visit to La Posada, with its unique approach to senior living. The residents were very curious about the bus, the neuroscience activities, and enjoyed interacting with the Brain Bus volunteers .



January 27. Vail Innovation Center. This school has in-class, virtual, and hybrid programs. Many of the children came with parents and we also did some activities with staff. We introduced our newly created Brain Mass vs. Body Mass chart.

February 16 and 17. Leman Academy of Excellence, Oro Valley, AZ. Five 2nd-grade classes visited the Bus to learn about brain nutrition, protection, reaction time and neuroplasticity.

February 18. Children's Museum Tucson's Family SciFest. Five NCSACS Club members from University of Arizona joined the Brain Bus volunteers to display the Brain Zoo, along with the other neuroscience activities.

March 3-5. Cologuard Classic Golf Tournament. Visitors to our display enjoyed putting golf balls, while wearing prism glasses and learning how quickly the brain can adapt.



March 4 and 5. Tucson Festival of Books, Science City. Always attracts a large crowd of people of every age. Dr. Lynne Oland displayed a human brain, while explaining the anatomy and physiology. Other volunteers kept the crowd busy with activities, including mirror boxes and walking a line wearing concussion goggles. We distributed Marijuana pocket cards and flyers, explaining and detailing: Marijuana is the New Alcohol: Illegal Before 21 Years, Unsafe for the Developing Brain Including Adolescent Brains, and Potentially Toxic for Anyone – with References.

March 8. Sam Lena-South Tucson Library. Children from a nearby school walked over to participate in activities and learn about their amazing brains.



March 18. TMC's Be Safe Saturday. Children were encouraged to make "helmets" for raw eggs, sturdy enough to keep the egg from breaking when dropped from a 6' ladder. Everyone enjoyed it when the firefighters made a "helmet" for an egg and dropped it off their ladder connected to the firetruck. It was estimated that almost 5,000 attended the event.



April 15. All in for Autism. At this great event, kids of all ages enjoyed participating in a variety of activities and created neurons out of pipe cleaners and beads to take home.

April 15. Southern Arizona Area Health Education Centers and JTED Health Fair. Students interested in health care careers interacted with neuroscience students and had fun trying out the Brain Bus activities.



April 16. Cyclovia. This event happened to fall on the first day of Volunteer Appreciation Week. What a great time to honor the amazing individuals who donate their time and talent to fulfill our Foundation's mission.

April 28. St. Cyril of Alexandria School. Students and Parent volunteers were happy to spend time at the Brain Bus learning about Brain Anatomy and Neuroplasticity. Students handwrote beautiful thank you notes.



Dear Ms. Hopkinson, May 1, 2023

I appreciate you and your group visiting our school. I learned very interesting facts about the brain. The activities were very entertaining and while we were having fun, we were also learning. My friends and I shared an exciting experience together. Now I know lots of new information about the brain and how it works thanks to you. The new things I learned about the brain was very fascinating fun facts. Thank you for taking time out of your year and day to teach our school.

May 2. B'nai B'rith Covenant House. Since the residents were so helpful assembling the Brain Boxes, and creating decorations for the Gray and White Fête, the Brain Bus made a visit to show them what our foundation was all about. Everyone enjoyed spending time outdoors on a beautiful day.

June 17. Pima County Sheriff's Department's Badges and Backpacks. Volunteers had as much fun as the event attendees. All of the local celebrities, like Wilbur and McGruff, were there. Visitors to the Brain Bus took home clip-on neurons for their new backpacks.

August 23. Amphi School's Family Resource Fair. Students and their parents got a chance to warm up their concentration skills before the start of school. As usual, the Mirror Boxes were very popular.



October 21. Watermark's Hacienda on the River. The Brain Bus didn't have to travel very far, with all of the activities and volunteers to spend the morning with residents and their families.



October 28, TMC's Spooktacular Safety Fair. Brain Bus Volunteers took another opportunity to speak to parents and children about the importance of wearing helmets while biking, skateboarding, skiing, scootering, etc.

November 5. Westward Look Resort. B'nai B'rith International Center for Senior Services Annual Conference was held in Tucson. Attendees heard about the earlier Brain Bus visit to B'nai B'rith Covenant House and were eager to try some of the activities in person.

November 11. Truly Nolen Car Show. While the Brain Bus was not entered into the car show competition, the neuroscience learning activities were a popular attraction

November 15. Optum Community Center. Active Seniors tried out a few of the Brain Bus activities in between their exercise and educational sessions at the center.

November 17. SARSEF Stem Adventure at Pima Community College, Northwest Campus. It wasn't just the 800 students who were drawn to the Brain Bus. Even the security personnel had to try out the activities.



December 3. Watermark Oro Valley. Volunteers were able to adapt Brain Bus activities for residents to participate. Everyone enjoyed a gorgeous outdoor Tucson Day.

December 30. Arizona Bowl Tailgate Festival. Hundreds of fans from Wyoming and Ohio were drawn to the Brain Bus and enjoyed trying the Neuroscience activities. There were also quite a few Tucsonans who came out to take part in the festivities.

Meet Me at the Kasbah

The Gray and White Fête

Our annual fundraising event was a success, and it's a testament to the hard work and dedication of everyone involved – from supporters and attendees to volunteers.

Morocco is known for its rich culture, vibrant traditions, and hospitable atmosphere. The Gray and White Fête was a Moroccan night to remember...a magical evening filled with delicious food, engaging entertainment, and the chance to learn belly dancing.

Traditional Moroccan music flowed, while henna artists and fortune tellers engaged the guests.

